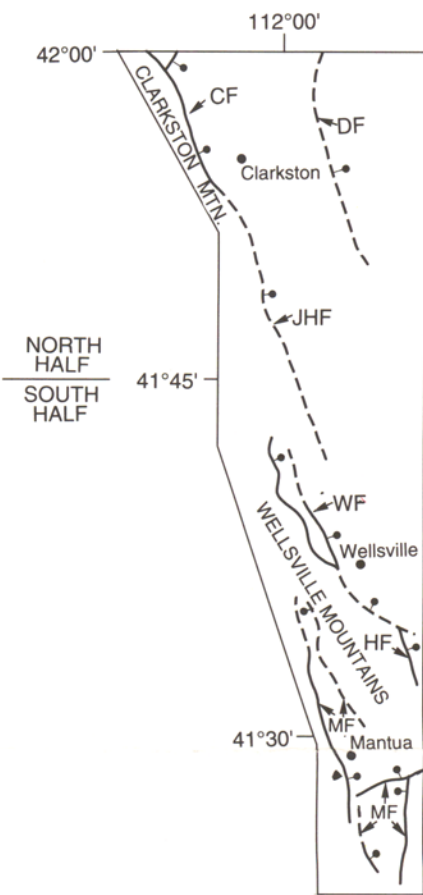


PLATE 1
(SOUTH HALF)

SURFICIAL GEOLOGIC MAP OF THE WEST CACHE
FAULT ZONE AND NEARBY FAULTS,
BOX ELDER AND CACHE COUNTIES, UTAH

by
Barry J. Solomon
1999



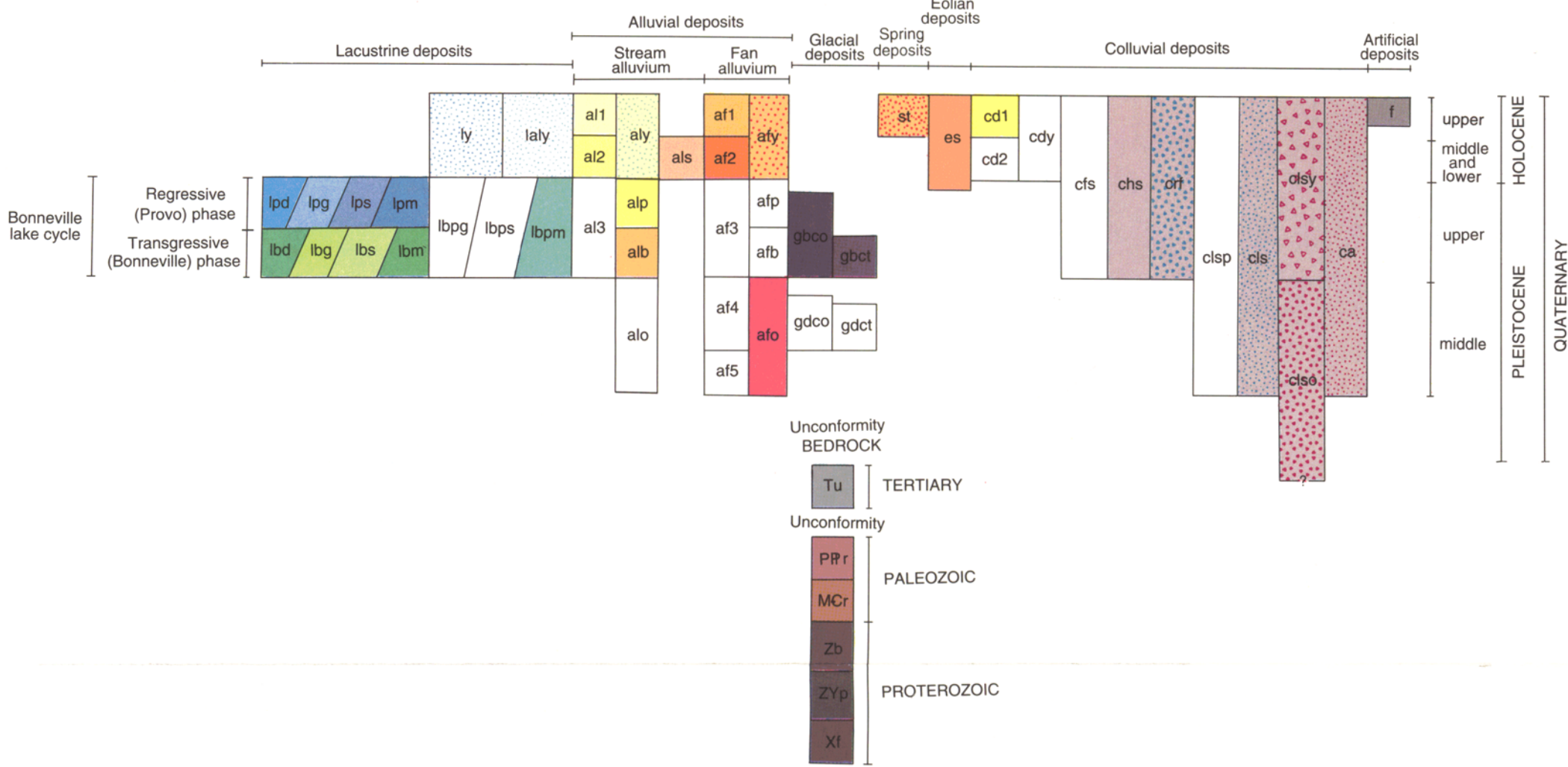
INDEX MAP

[The West Cache fault zone includes the Clarkston (CF), Junction Hills (JHF), and Wellsville (WF) faults. Nearby faults are the Dayton (DF), Hyrum (HF), and Mantua (MF) faults.]



CORRELATION OF MAP UNITS

[This correlation shows surficial deposits mapped along the West Cache fault zone and nearby faults, as well as the Wasatch and East Cache fault zones, Utah. Map units without pattern/color in the correlation do not appear on this map, but are included to aid correlation with other maps in this series]



DESCRIPTION OF MAP UNITS

(appendix in text pamphlet has detailed descriptions)

LACUSTRINE DEPOSITS

DEPOSITS YOUNGER THAN THE BONNEVILLE LAKE CYCLE
(HOLOCENE TO UPPERMOST PLEISTOCENE)

- ly Younger lacustrine and marsh deposits
- laly Lacustrine, marsh, and alluvial deposits, undivided

DEPOSITS OF THE PROVO (REGRESSIVE) PHASE OF THE BONNEVILLE LAKE CYCLE
(UPPERMOST PLEISTOCENE)

- lpd Deltaic deposits
- lpg Lacustrine gravel and sand
- lps Lacustrine sand and silt
- lpm Lacustrine silt and clay

DEPOSITS OF THE BONNEVILLE (TRANSGRESSIVE) PHASE OF THE BONNEVILLE LAKE CYCLE
(UPPER PLEISTOCENE)

- lbd Deltaic deposits
- lbg Lacustrine gravel and sand
- lbs Lacustrine sand and silt
- lbm Lacustrine silt and clay

UNDIVIDED DEPOSITS OF THE BONNEVILLE LAKE CYCLE
(UPPER PLEISTOCENE)

- lbpm Lacustrine silt and clay

ALLUVIAL DEPOSITS

DEPOSITS OF STREAM ALLUVIUM

- al1 Stream alluvium, unit 1 (upper Holocene)
- al2 Stream alluvium, unit 2 (middle Holocene to uppermost Pleistocene)
- aly Younger stream alluvium, undivided (Holocene to uppermost Pleistocene)
- als Alluvial sand and silt of natural levees (middle Holocene to uppermost Pleistocene)
- alp Stream alluvium related to the Provo phase of the Bonneville lake cycle (uppermost Pleistocene)
- alb Stream alluvium related to the Bonneville phase of the Bonneville lake cycle (upper Pleistocene)

ALLUVIAL-FAN DEPOSITS

- af1 Fan alluvium, unit 1 (upper Holocene)
- af2 Fan alluvium, unit 2 (middle Holocene to uppermost Pleistocene)
- afy Younger fan alluvium, undivided (Holocene to uppermost Pleistocene)
- afo Older fan alluvium, undivided (upper to middle Pleistocene; pre-Bonneville lake cycle)

GLACIAL DEPOSITS

DEPOSITS OF BELLS CANYON AGE
(UPPER PLEISTOCENE, PINEDALE EQUIVALENT)

- gbcs Outwash
- gbct Till

SPRING DEPOSITS

- st Spring travertine (upper Holocene)

EOLIAN DEPOSITS

- es Eolian sand and silt (Holocene to uppermost Pleistocene)

COLLUVIAL DEPOSITS

- cd1 Debris flows, unit 1 (upper Holocene)
- chs Hillslope colluvium (Holocene to upper Pleistocene)
- clt Rock-fall (talus) deposits (Holocene to upper Pleistocene)
- clay Younger landslide deposits (Holocene to upper Pleistocene)
- clau Older landslide deposits (upper Pleistocene to upper Tertiary?)
- cls Landslide deposits, undivided (Holocene to middle Pleistocene)
- ca Colluvium and alluvium, undivided (Holocene to middle Pleistocene)

FILL DEPOSITS

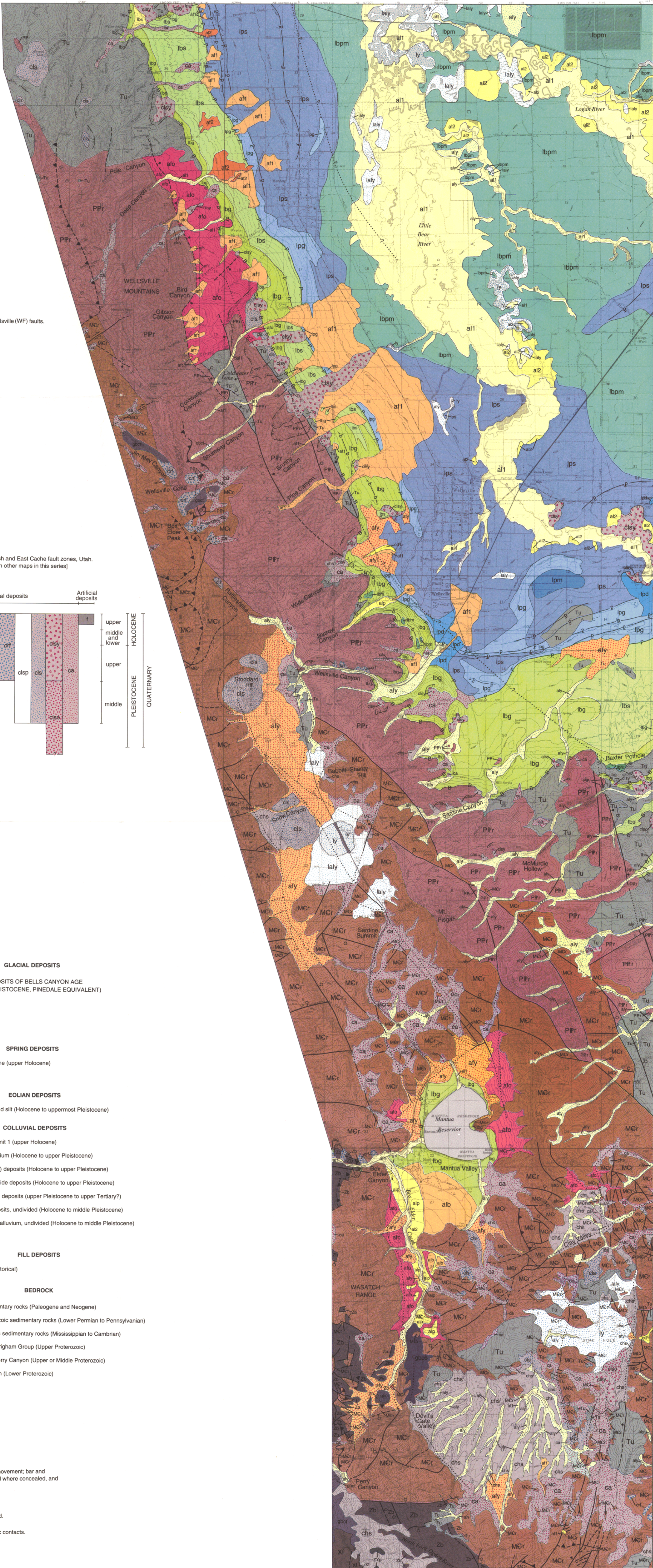
- f Artificial fill (historical)

BEDROCK

- Tu Tertiary sedimentary rocks (Paleogene and Neogene)
- PPr Younger Paleozoic sedimentary rocks (Lower Permian to Pennsylvanian)
- MCr Older Paleozoic sedimentary rocks (Mississippian to Cambrian)
- Zb Lower part of Brigham Group (Upper Proterozoic)
- Zyp Formation of Perry Canyon (Upper or Middle Proterozoic)
- Xt Facet Formation (Lower Proterozoic)

MAP SYMBOLS

- Contact
- Normal fault - Bar and solid ball on downthrown side of faults with evidence of Quaternary movement; bar and hollow ball, or no bar and ball, along other faults. Dashed where approximately located, dotted where concealed, and queried where location is uncertain.
- Strike-slip fault - Arrows show relative movement; dashed where approximately located.
- Thrust fault - Sawtooth indicate overriding plate or block; dashed where approximately located.
- Major shorelines related to levels of the Bonneville lake cycle - May coincide with geologic contacts.
- Highest shoreline of the Bonneville level
- Other shorelines of the Bonneville level - Mostly transgressive.
- Highest shoreline of the Provo level
- Other shorelines of the Provo level - Mostly regressive.
- Undesignated shorelines of the Bonneville lake cycle
- Topographic escarpment - Escarpments along stream channels, terraces, and deltas; formed primarily by fluvial processes. Where escarpments coincide with geologic contacts, hachures extend upslope.
- Landslide escarpment - Main and minor scarps formed by landsliding; may coincide with geologic contacts; hachures extend downslope; dashed where approximately located.

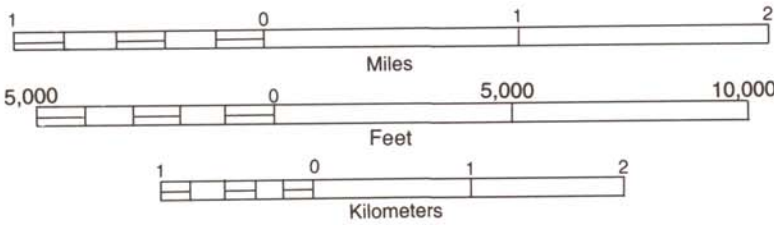


**PLATE 1
(NORTH HALF)**

**SURFICIAL GEOLOGIC MAP OF THE WEST CACHE
FAULT ZONE AND NEARBY FAULTS,
BOX ELDER AND CACHE COUNTIES, UTAH**

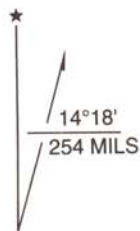
by
Barry J. Solomon
1999

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SCALE 1:50,000

Base map from U.S. Geological Survey, 1:24,000 scale Honeyville (1961), Clarkston (1964), Cutler Dam (1964), Portage (1964), Trenton (1964), Brigham City (1969), Newton (1986), Wellsville (1986), Mantua (1991), and Mount Pisgah (1991) quadrangles.



1999 MAGNETIC DECLINATION
AT CENTER OF SHEET

Map 172
UTAH GEOLOGICAL SURVEY
a division of
UTAH DEPARTMENT OF NATURAL RESOURCES
in cooperation with
THE UNITED STATES GEOLOGICAL SURVEY

